

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION DR-518

Effective February 1, 2012

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **December 2015**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

350 IR Commercial Aluminum Glazed Outswing Hinged Doors, Impact Resistant, manufactured by

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will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The 350 IR commercial doors specified in this evaluation report are aluminum outswing hinged glazed doors. This evaluation report includes aluminum outswing hinged glazed doors based on the following tested configurations:

General Description:

System	Description	Label Rating
1	350 IR Commercial Aluminum Glazed Outswing Hinged Double Doors; XX	Refer to Hardware Options

Component Dimensions:

System	Overall Size	Maximum Door Panel Sizes	Maximum Daylight Opening Size
1	101" x 98 1/2"	Two: 47 7/8" x 95 3/16"	40 13/16" x 85 3/16"

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1	SG-1, SG-2, or SG-3	GM-1, GM-2, or GM-3

Note: ¹ See the "Glass Construction Key" for the glazing construction.

² See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

- SG-1: The door panels contain a laminated glass unit. The laminated glass unit is comprised of two $\frac{1}{4}$ " heat strengthened glass lites with a 0.077" Vanceva interlayer. The glass thickness used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.
- SG-2: The door panels contain a laminated glass unit. The laminated glass unit is comprised of two $\frac{1}{4}$ " heat strengthened glass lites with a 0.090" DuPont SGP interlayer. The glass thickness used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.
- SG-3: The door panels contain a laminated glass unit. The laminated glass unit is comprised of two $\frac{1}{4}$ " heat strengthened glass lites with a 0.090" Solutia PVB interlayer. The glass thickness used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.
- SG-4: The door panels contain a laminated glass unit. The laminated glass unit is comprised of two $\frac{1}{4}$ " heat strengthened glass lites with a 0.090" DuPont PVB interlayer. The glass thickness used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

- GM-1 Tape Glaze: Interior: Interior door glass stop and 3M glazing tape. Exterior: Fixed door gasket with a glass stop.
- GM-2 Dry Glaze: Interior: Fixed door gasket with a glass stop. Exterior: Fixed door gasket with a glass stop.
- GM-3 Wet Glaze: Interior: Interior door glass stop with spacer tape and structural silicone. Exterior: Fixed door gasket with a glass stop.

Frame Construction: The frame is manufactured of extruded aluminum. The frame is a screw spline assembly.

Panel Construction: The door panels are manufactured of extruded aluminum. The panel members are clipped and welded.

Hinge Options:

- Top Offset Pivot; Two (2) required; Located on the door panels, hinge side.
- Intermediate Offset Pivot; Two (2) required; Located on the door panels, hinge side.
- Bottom Offset Pivot, RH; One (1) required; Located on the door panels, hinge side.
- Bottom Offset Pivot, LH; One (1) required; Located on the door panels, hinge side.
- Butt Hinges; Four (4) required per door panel; Located on the door panels, hinge side.
- Continuous Gear Hinge; One (1) required; Located on the active door panel, hinge stile.

Hardware Options:

Design Pressure	Hardware	Quantity	Location
+70/-70	AR MS 1850 Deadlock	1	Active Panel Lock Stile
	4016 Top Bolt	1	Active Panel Lock Stile
	4056 Bottom Bolt	1	Active Panel Lock Stile
	Impact Flush Bolt	2	Inactive Panel Stile
	Impact Bolt Guide	2	Inactive Panel Stile
	Concealed Overhead Closer	2	Door Frame Head
	Keyed Cylinder	1	Active Panel

Hardware Options (Continued):

Design Pressure	Hardware	Quantity	Location
+70/-70	Jackson 2086 Concealed Rod Panic Device	1	Active Panel
	Kawneer 1686 Concealed Rod Panic Device	1	Inactive Panel
	Concealed Overhead Closer	2	Door Frame Head
	Keyed Cylinder	1	Active Panel
+70/-70	Paneline Exit Device	1	Active Panel
	Sargent AD-8400 Exit Device	1	Inactive Panel
	Concealed Overhead Closer	2	Door Frame Head
	Keyed Cylinder	1	Active Panel
+70/-70	Adams Rite G86 Concealed Rod Panic Device	1	Active Panel
	Calibre 9100 Concealed Rod Panic Device	1	Inactive Panel
	Concealed Overhead Closer	2	Door Frame Head
	Keyed Cylinder	1	Active Panel
+40/-40	Von Duprin 9947 Concealed Rod Device	1	Active Panel
	Von Duprin 9947 Concealed Rod Device	1	Inactive Panel
	Concealed Overhead Closer	2	Door Frame Head
	Keyed Cylinder	1	Active Panel
+70/-70	Paneline Exit Device	1	Inactive Panel
	Kawneer 1686 Concealed Rod Panic Device	1	Active Panel
	Concealed Overhead Closer	2	Door Frame Head
	Keyed Cylinder	1	Active Panel
+70/-70	Adams Rite Controller 2180 Deadlock	1	Inactive Panel
	Adams Rite MS 1850 3 point lock	1	Active Panel
	Concealed Overhead Closer	2	Door Frame Head
	Keyed Cylinder	1	Active Panel
+70/-70	Kawneer 1686 Concealed Rod Panic Device	1	Active Panel
	Concealed Overhead Closer	2	Door Frame Head
	Keyed Cylinder	1	Active Panel

Product Identification: A manufacturer's identification label will be affixed to the door assembly. The label includes the manufacturer's name, the product name; the maximum dimensions; the test standards (ASTM E 330, ASTM E 1886, ASTM E 1996), and the design pressure rating.

LIMITATIONS

Design pressures (DP):

System	Overall Width (in.)	Overall Height (in.)	Design Pressure (psf)
1	101	98 ½	Refer to Hardware Options

Impact Resistance: These door assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I** zone and the **Seaward** zone. The door assemblies passed the large missile impact test (which equates to Missile Level D specified in ASTM E 1996-04). The door assemblies may be installed at any height on the structure as long as the design pressure rating

for the assemblies is not exceeded. These door assemblies will not need to be protected with an impact protective system when installed in areas where windborne debris protection is required.

Acceptance of Smaller Assemblies: Assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The door assemblies shall be installed in accordance with the manufacturer's installation instructions and this product evaluation report. Detailed installation instructions are available from the manufacturer.

Installation: Wall framing shall be minimum Southern Yellow Pine dimension lumber. The frame head and side jambs shall be secured to the wall framing using minimum No. 12 x 3 1/2" screws. Along the side jambs, the fasteners shall be located approximately 6 inches from each corner and approximately 14 3/8 inches on center. Along the head, the fasteners shall be located approximately 5 inches from each corner and at the mid-span of the door panel. At the center mullion, three (3) fasteners shall be located on either side of the mullion, located 3 inches from the mullion and 3 inches apart. The sill shall be secured to the wall framing with No. 12 x 2" screws. The fasteners shall be located approximately 5 inches from each corner and at the mid-span of the door panel. At the center mullion, three (3) fasteners shall be located on either side of the mullion, located 3 inches from the mullion and 3 inches apart. If the sill is secured to concrete, the fasteners shall be minimum 1/4" x 2 3/4" Tapcons. All fasteners shall have a minimum embedment of 1 1/2 inches into the substrate.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.